Clinical Physiology

Volume 13, 1993

EDITOR

J. Bülow *Copenhagen*

REVIEW ARTICLES EDITOR

J. H. Henriksen *Hvidovre*

ASSOCIATE EDITORS

R. H. T. Edwards *Liverpool*

N. A. Lassen *Copenhagen* J. W. Severinghaus *San Francisco*

A. Uusitalo *Tampere* H. Vik-Mo *Bergen*

J. Wahren *Stockholm*

Published for the

Scandinavian Society of Clinical Physiology

by Blackwell Scientific Publications

© 1993 Blackwell Scientific Publications Ltd

Authorization to photocopy for internal or personal use or the internal or personal use of specific clients is granted by Blackwell Scientific Publications. For libraries and other users registered with the Copyright Clearance Centre (CCC) Transactional Reporting Service, authorization is granted provided that the base fee of $10.00 per copy is paid directly to the CCC, 27 Congress Street, Salem, MA 01970, USA. This consent does not extend to other kinds of copying, such as copying for general distribution for advertising or promotional purposes, for creating new collective works or for resale. Special requests should be addressed to the Editor 0144-5979/90 $10.00.

Published by Blackwell Scientific Publications
Osney Mead, Oxford OX2 0EL
25 John Street, London WC1N 2BL
23 Ainslie Place, Edinburgh EH3 6AJ
3 Cambridge Centre, Suite 208, Cambridge, MA 02142, USA
54 University Street, Carlton, Victoria 3053, Australia
2 Rue Casimir Delavigne, 75005 Paris, France
Düsseldorfer Strasse 38, D-10707 Berlin, Germany
Feldgasse 13, A-1238 Vienna, Austria

ISSN 0144-5979/90

Printed and bound in Great Britain at the Devonshire Press, Torquay

Contents

NUMBER 1 JANUARY 1993

Review article

1 Cardiovascular changes during hypoglycaemia
J. Hilsted

Original communications

11 A model approach for calculating the net capillary filtration rate during venous occlusion
P. J. Kolari

19 Scintigraph detection of gastro-pulmonary aspiration in patients with respiratory disorders
M. Ruth, S. Carlsson, I. Månsson, U. Bengtsson and N. Sandberg

35 Variability of the computerized single-breath nitrogen washout test in healthy adults. Results from a field survey in a French rural area
D. B. Teculescu, E. Rebsock, I. Caillier, Q. T. Pham, E. Costantino, O. Bouchy with technical assistance of M. Marchand and J.-C. Henquel

51 Attenuated Valsalva heart rate response in subjects with smoking history: possible role of autonomic dysfunction
S. J. Piha and A. Seppänen

57 Oesophageal dysfunction in familial amyloidosis with polyneuropathy
P. Bjerle, B. Ek, H. Linderholm and L. Steen

71 Heart-rate variation: what are we measuring?
U. Niklasson, U. Wiklund, P. Bjerle and B.-O. Olofsson

81 High anaerobic energy release during submaximal arm exercise
M. Jensen-Urstad, I. Hallbäck and K. Sahlin

89 Accuracy and repeatability of a pocket turbine spirometer: comparison with a rolling seal flow-volume spirometer
L. P. Malmberg, J. Hedman and A. Sovijärvi

99 Venous plasma noradrenaline increases with age: correlation to total blood volume and long-term smoking habits
E. W. Jensen, E. Eldrup, H. Kelbæk, S. L. Nielsen and N. J. Christensen

111 Instructions to authors

NUMBER 2 MARCH 1993

Original communications

113 Changes in the QRS segment during exercise: effects of acute β-blockade with propanolol
M. Pilhall, M. Riha and S. Jern

133 Breath-by-breath determination of inspiratory occlusion pressure
H. Larsson, L. G. Hellström and D. Linnarsson

143 Plasma cholesterol ester transfer protein and distribution of cell cholesterol among plasma lipoproteins *in vitro* in distance runners and sedentary men
W. H. F. Sutherland, S. A. Stapely, M. C. Robertson and E. R. Nye

153 Regional differences of atrial natriuretic factors in humans
I. Os, E. Thaulow and A. Westheim

161 Right ventricular pressure-volume relations in chronic lung disease
F. V. Schrijen, J. Redondo, A. H. Henriquez and F. Chabot

171 β-adrenergic blockade improves uniformity of local contraction in the anterior wall of feline left ventricle
J. Segedal, J. Lekven and E. Hexeberg

185 Circadian variation of cardiac autonomic regulation during 24-h bed rest
J. Hartikainen, I. Tarkiainen, K. Tahvanainen, M. Mäntysari, E. Länsimies and K. Pyörälä

197 Effect of propofol and thiopentone on regional blood flow in brain and peripheral tissues during normoxia and hypoxia in the dog
J. P. Haberer, G. Audibert, C. G. Saunier, C. Muller, M. C. Laxenaire and D. Hartemann

209 Chloroquine reduces blood pressure and forearm vascular resistance and increases forearm blood flow in healthy young adults
C. N. Anigbogu, S. A. Adigun, I. Inyang and B. J. Adegunloye

217 Instructions to authors

NUMBER 3 MAY 1993

219 Plasma exudation and solute absorption across the airway mucosa
L. Greiff, I. Erfefält, C. Svensson, P. Wollmer, U. Alkner, M. Andersson and C. G. A. Persson

235 The effect of increasing temperature on skin blood flow and red cell deformability
M. S. Rendell, S. T. Kelly, O. Bamisedun, T. Luu, D. A. Finney and S. Knox

247 Effect of nifedipine on splanchnic and pulmonary vascular capacitance
C. Risøe, A. Smiseth, K. Rootwelt, S. Sire and S. Simonsen

257 Maintained hyperexcretion of thromboxane A_2 metabolite in healthy young cigarette smokers: results from a prospective study in randomly sampled males with stable smoking habits
Å. Wennmalm, G. Benthin, E. F. Granström, L. Persson and S. Winell

265 No effect of carbohydrate feeding on glycogen synthase in human muscle during exercise
Z. Yan, M. K. Spencer and A. Katz

271 Effects of cold pressor test on circulating atrial natriuretic peptide 99–126 (ANP) in patients with Raynaud's phenomenon and influence of treatment with magnesium sulphate and nifedipine
I. Ringqvist, T. Hedner, J. Leppert, U. Niklasson and L. Edvinsson

281 Cardioinhibitory-vasodepressor response to head-up tilt without hypoxaemia or myocardial ischaemia
S. Matzen and N. H. Secher

289 Pulmonary arterial wedge pressure measurement can modify pulmonary haemodynamics in patients with chronic lung disease
F. V. Schrijen, A. Serri and F. Chabot

299 Platelet activation in mental stress
O. Naesh, C. Haedersdal, I. Hindberg and J. Trap-Jensen

309 Stress hormones alter the pattern of free amino acids in human skeletal muscle
J. Wernerman, F. Hammarqvist, D. Botta and E. Vinnars

320 Instructions to authors

NUMBER 4 JULY 1993

323 Middle cerebral artery velocity during head-up tilt induced hypovolaemic shock in humans
L. G. Jørgensen, M. Perko, G. Perko and N. H. Secher

337 Work capacity and metabolic and morphologic characteristics of the human quadriceps muscle in response to unloading
H. E. Berg, G. A. Dudley, B. Hather and P. A. Tesch

349 The effect of opioids on inspiratory muscle fatigue during inspiratory resistive loading
T. Wanke, H. Lahrmann, D. Formanek, B. Zwick, M. Merkle and H. Zwick

361 Renal effects of i.v. adenosine infusion in humans
A. Edlund and A. Sollevi

373 Variability of digitized left ventricular M-mode echocardiography: a study in healthy subjects and patients with repaired tetralogy of Fallot
G. Norgård and K. A. Johannessen

385 Glucose-induced thermogenesis in patients with small cell lung carcinoma. Before and after inhibition of tumour growth by chemotherapy
L. Simonsen, J. Bülow, H. Sengeløv, J. Madsen and L. Ovesen

397 Planar ^{201}Tl scintigraphy in ischaemic heart disease: a critical re-evaluation of qualitative and quantitative data analysis
F. Pedersen, F. Rabøl, S. S. Sørensen, P. F. Høilund-Carlsen, J. K. Madsen, F. Efsen and E. Sandøe

409 Neuropeptide Y, noradrenaline and invasive haemodynamic data in mild to moderate chronic congestive heart failure
B. Ullman, M. Jensen-Urstad, J. Hulting and J. M. Lundberg

419 Comparison between reference values for ^{201}Thallium uptake and washout from the myocardium after exercise and after dipyridamole
O. Munck, P. V. Madsen, H. Kelbæk and J. Godtfredsen

429 Changes in plasma volume and baroreflex function following resistance to exercise
L. L. Ploutz, D. L. Tatro, G. A. Dudley and V. A. Convertinoz

439 Instructions to authors

NUMBER 5 SEPTEMBER 1993

441 Simulation of the electrogram from ion currents
B. Wohlfart and P. Arlock

453 Simulation of ECG from two pairs of action potentials
B. Wohlfart

469 Fatigue in the shoulder muscles during static work at two different torque levels
B. Gerdle, M. Edström and M. Rahm

483 Relationships between exercise ECG and angiocardiographic indices of coronary insufficiency and myocardial fibrosis in coronary heart disease
C. Backman, K. A. Jacobsson, H. Linderholm and G. Osterman

497 About mechanisms of prostaglandin E_1 induced deterioration of pulmonary gas exchange in COPD patients
Ž. Dujić, D. Eterović, J. Tocilj, Z. Kusić and V. Čapkun

507 Age-related diminution of the cardiovascular autonomic responses: diagnostic problems in the elderly
S. J. Piha

519 Loss of the nocturnal dip and increased variability of blood pressure in normotensive patients with noninsulin-dependent diabetes mellitus
W. J. Johnston

525 Tachycardia and coronary blood flow: non-invasive estimation during valsalva manoeuvre and exercise
M. Ciccone, A. Federici, D. di Noia, A. Cipressa, M. Epifani, G. Losano and P. Rizzon

535 Effect of temperature on finger artery pressure evaluated by volume clamp technique
H. Tanaka and O. Thulesius

Technical note

547 Volume blood flow measurements with a transit time flowmeter: an *in vivo* and *in vitro* variability and validation study
A. Lundell, D. Bergqvist, E. Mattsson and B. Nilsson

558 Instructions to authors

Contents

NUMBER 6 NOVEMBER 1993

561 DC photoplethysmography in the evaluation of sympathetic vasomotor responses
S. S. Barron, Z. Rogowski, Y. Kanter and J. Hemli

573 Non-invasive estimates of aortic root pressures: external subclavian arterial pulse tracing calibrated by oscillometrically determined brachial arterial pressures
S. Aakhus, H. Torp, T. Haugland and L. Hatle

587 Reproducibility of cardiac volume measurements including left ventricular mass determined by MRI
J. Møgelvang, K. Lindvig, L. Søndergaard, K. Saunamäki and O. Henriksen

599 Changes in skin blood flow in ischaemic limbs after vascular reconstruction measured by fluorescein flowmetry and laser Doppler flowmetry
E. Proano and L. Perbeck

611 Factors affecting the validity of the standard blood pressure cuff
M. Stolt, G. Sjönell, H. Åström and L. Hansson

621 Postural effects on diastolic blood pressure are differently recorded by a non-invasive ambulatory blood pressure monitor and a standard ausculatory device
Å. Schwan

631 Non-invasive measurement of pulsatile vessel diameter change and elastic properties in human arteries: a methodological study
F. Hansen, D. Bergqvist, P. Mangell, Å. Rydén, B. Sonesson and T. Länne

645 The effect of hyperosmotic solutions on the hepatic blood flow
K. Winkler, J. H. Henriksen and N. Tygstrup

653 Differences in vascular effects and removal of endothelin-1 in human lung, brain, and skeletal muscle
E. Weitzberg, G. Ahlborg and J. M. Lundberg

663 Spontaneous baroreflex by sequence and power spectral methods in humans
R. L. Hughson, L. Quintin, G. Annat, Y. Yamamoto and C. Gharib

677 Effect of vasoactive intestinal polypeptide (VIP) on pulmonary ventilation-perfusion relationships and central haemodynamics in healthy subjects
C. Söderman, L. S. Eriksson, A. Juhlin-Dannfelt, J. M. Lundberg, L. Broman and A. Holmgren

687 Book Review

689 Instructions to authors

691 Author index: volume 13

Volume contents: volume 13